AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made. The claims have been amended as follows:

1. **(Previously Presented)** A method of detecting a computer virus, comprising:

emulating computer executable code in a subject file;

detecting at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by the emulation of the computer executable code; and

comprises insertion of a pointer to a viral exception handler, the pointer associated with a particular exception;

and

detecting at least one instruction, wherein the at least one instruction forces the particular exception.

2. **(Previously Presented)** The method of Claim 1, wherein:

the at least one modification further comprises installation of the viral exception handler.

3. **(Previously Presented)** The method of Claim 1, wherein the particular exception comprises at least one of the following:

a divide-by-zero arithmetic operation;

an execution of an undefined computer instruction; and

a memory access to an undefined or illegal memory address.

4. **(Canceled)**

5. **(Previously Presented)** A method of detecting a computer virus, comprising:
emulating computer executable code in a subject file;
detecting at least one modification to a memory state of a computer system, wherein:
the memory state comprises a particular interrupt associated with a legitimate interrupt handler; and
the at least one modification:
is caused by the emulation of the computer executable code;
comprises installation of a viral interrupt handler; and
associates the particular interrupt with the viral interrupt handler instead of the legitimate interrupt handler;
and
detecting at least one instruction, wherein the at least one instruction forces the particular interrupt.

6. **(Previously Presented)** The method of Claim 5, further comprising:
detecting writing of a pointer to at least one predetermined address in a system memory for storing an interrupt handler pointer.

7. **(Previously Presented)** The method of Claim 5, further comprising:
detecting use of a predetermined instruction to retrieve an address in a system memory corresponding to an interrupt descriptor table.

8. **(Currently Amended)** ~~A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method~~ **Logic** for detecting a computer virus, the **logic encoded in computer readable media and operable when executed to** ~~method comprising~~:

~~emulating~~ **emulate** computer executable code in a subject file;

~~detecting~~ **detect** at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by the emulation of the computer executable code; and

comprises ~~installation of~~ **insertion of a pointer to** a viral exception handler ~~or a viral interrupt handler~~ **, the pointer associated with a particular exception**;

and

~~detecting~~ **detect** at least one instruction, wherein the at least one instruction forces [:] **the particular** ~~an~~ exception ~~associated with the viral exception handler; or~~

~~an interrupt associated with the viral interrupt handler~~.

9. **(Currently Amended)**~~A computer system, comprising~~ **Logic for detecting a computer virus, the logic encoded in computer readable media and operable when executed to**:

~~a processor; and~~

~~a program storage device readable by a computer system, tangibly embodying a program of instructions executable by the processor to perform a method for detecting a computer virus, the method comprising:~~

~~emulating~~ **emulate** computer executable code in a subject file;

~~detecting~~ **detect** at least one modification to a memory state of a computer system, wherein**:**

the memory state comprises a particular interrupt associated with a legitimate interrupt handler; and

the at least one modification:

is caused by the emulation of the computer executable code; ~~and~~

comprises installation of ~~a viral exception handler or~~ a viral interrupt handler**; and**

associates the particular interrupt with the viral interrupt handler instead of the legitimate interrupt handler;

and

detect at least one instruction, wherein the at least one instruction forces the particular interrupt.

10. **(Canceled)**

11. **(Canceled)**

12. **(Canceled)**

13. **(Currently Amended)** ~~The apparatus of Claim 11, wherein the at least one modification further~~ **An apparatus for detecting computer viruses, comprising:**

an emulator component operable to emulate computer executable code in a subject file; and

a detector component operable to:

detect at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by emulation of the computer executable code; and

comprises installation of a viral exception handler~~, and further comprising detecting~~**;**

and

detect at least one instruction, wherein the at least one instruction forces a particular exception associated with the viral exception handler.

14. **(Previously Presented)** The apparatus of Claim 13, wherein the particular exception comprises at least one of the following:

a divide-by-zero arithmetic operation;

a memory access to an undefined or illegal memory address; and

execution of an undefined computer instruction.

15. **(Previously Presently)** The apparatus of Claim 13, wherein the at least one modification further comprises writing of a pointer to the viral exception handler, the pointer associated with the particular exception.

16. **(Currently Amended)** ~~The apparatus of Claim 11, wherein the at least one modification further~~ **An apparatus for detecting computer viruses, comprising:**

an emulator component operable to emulate computer executable code in a subject file; and

a detector component operable to:

detect at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by emulation of the computer executable code; and

comprises installation of a viral interrupt handler**;**

and

detect ~~, and further comprising detecting~~ at least one instruction, wherein the at least one instruction forces a particular interrupt associated with the viral interrupt handler.

17. **(Canceled)**

18. **(Previously Presented)** The apparatus of Claim 16, wherein the at least one modification further comprises writing of a pointer to the viral interrupt handler, the pointer associated with the particular interrupt.

19. **(Previously Presented)** The apparatus of Claim 16, wherein the at least one modification further comprises use of a predetermined instruction to retrieve an address in a system memory corresponding to an interrupt descriptor table.

20. **(Previously Presented)** The method of Claim 1, wherein the computer system comprises a first memory component and a second memory component, and wherein access to the second memory component is more restricted than access to the first memory component.

21. **(Currently Amended)** The method of Claim 20, wherein the viral exception handler ~~or the viral interrupt handler~~ attempts to modify the second memory component.

22. **(New)** The method of Claim 5, wherein the computer system comprises a first memory component and a second memory component, and wherein access to the second memory component is more restricted than access to the first memory component.

23. **(New)** The method of Claim 22, wherein the viral interrupt handler attempts to modify the second memory component.